

IN THE CLAIMS:

1. (Previously Presented) A method for changing a data transfer rate used in a part of a communications connection, comprising the steps of:

choosing a first processing method from a pre-determined set of processing methods;

choosing a first restoration method from a pre-determined set of restoration methods;

processing information using a processing method at a first point of the communications connection;

transferring the information from the first point to a second point of the communications connection, data transfer rates between the first point and the second point being a first set of data transfer rates;

restoring the information using said first restoration method at the second point of the communications connection;

changing at least one data transfer rate used between the first point and the second point, the data transfer rates used after changing the at least one data transfer rate between the first point and the second point being a second set of data transfer rates;

defining a set of compatible processing methods, each compatible processing method belonging to said pre-determined set of processing methods, having an output information rate that is lower than or equal to a lowest data transfer rate of said first set of data transfer rates and said second set of data transfer rates, and corresponding with a restoration method that belongs to said pre-determined set of restoration methods;

selecting, prior to changing the at least one data transfer rate, a second processing method from the set of compatible processing methods; and

replacing the first processing method with the second processing method and processing the information using the second processing method.

2. (Previously Presented) The method of claim 1, wherein a set of allowed processing methods is defined for each data transfer rate of the first set of data transfer rates and for each data transfer rate of the second set of data transfer rates and the set of compatible processing methods is arranged to include only those processing methods that belong to every set of allowed processing methods.

3. (Previously Presented) The method of claim 1, further comprising the step of:

branching said communications connection to travel simultaneously over both the first route and the second route after use of the second processing method;

wherein a route between the first point and the second point of the communications connection is moved completely or in part from the first route to the second route, the information is transferred on the first route using the first data transfer rates, and the information is transferred on the second route using the second data transfer rates.

4. (Previously Presented) The method of claim 3, wherein the second processing method is replaced with a third processing method during the branching of the communications connection, the third processing method being selected from the set of compatible processing methods.

5. (Previously Presented) The method of claim 4, wherein said restoring the information is moved from the second point to a third point of the communications connection and said pre-determined set of restoration methods consists of only restoration methods that are useable at both the second point and the third point.

6. (Previously Presented) The method of claim 4, wherein the information is transferred via a radio path to a wireless terminal located at the second point, and a radio path part of the first route is different than the radio path part of the second route.

7. (Previously Presented) The method of claim 6, wherein a data transfer rate of the radio path part of the first route is equal to a data transfer rate of the radio path part of the second route.

8. (Previously Presented) The method of claim 6, wherein a data transfer rate of the radio path part of the first route differs from the data transfer rate of the radio path part of the second route, and data transfer rates in other parts of the first route are equal to data transfer rates in corresponding parts of the second route, respectively.

9. (Currently Amended) The method of claim 1, wherein in a part of the communications connection the information is transferred inside transmission frames comprising transmission fields, said part being between the first point and the second point, a data transfer rate in said part is changed from a first value to a second value $[[e]]$, and the information is encapsulated in the transmission frames such that some of the transmission fields are empty when the data transfer rate in said part is a maximum of the first value and the second value.

10. (Previously Presented) The method of claim 1, wherein the information is transferred in a first direction over the communications connection and other information is transferred in a second direction over the communications connection, in the first direction of the communications connection the second processing method is used at the first point and a restoration method corresponding to the second processing method is used at the second point, and a third processing method and a restoration method corresponding to the third processing method are used in the second direction of the communications connection, and wherein the third processing method is selected from the set of compatible processing methods.

11. (Previously Presented) The method of claim 10, wherein in a part of the communications connection the information is transferred inside transmission frames comprising transmission fields, said part being located between the first point and the second point, a data transfer rate in the part is changed from a first value to a second value, and the information is

encapsulated in the transmission frames such that some of the transmission fields are empty when the data transfer rate in said part is a maximum of the first value and the second value.

12. (Previously Presented) The method of claim 9, further comprising the step of:
allocating the empty transmission fields for use of other communications connections.

13. (Previously Presented) The method of claim 11, further comprising the step of:
allocating the empty transmission fields for use of other communications connections.

14. (Previously Presented) The method of claim 1, wherein the second processing method is a lossless information processing method.

15. (Previously Presented) The method of claim 14, wherein the second processing method is a data transfer rate limiter.

16. (Previously Presented) The method of claim 1, wherein the processing method is a lossy information processing method.

17. (Previously Presented) The method of claim 16, wherein the second processing method is a speech compression method.

18. (Previously Presented) The method of claim 16, wherein the second processing method is an image compression method.

19. (Previously Presented) A system for changing a data transfer rate used in a part of a communications connection, at least one part of said communication connection being a radio path, the system comprising:

means for determining data transfer rates being used in parts of the certain communications connection, the data transfer rates being used in said parts being a first set of data transfer rates;

means for determining data transfer rates to be used next in said parts of the communications connection, the data transfer rates to be used next in said parts being a second set of data transfer rates;

processing means configured to perform information processing in accordance with a processing method that belongs to a pre-determined set of processing methods;

restoration means configured to perform information restoration in accordance with a restoration method that belongs to a pre-determined set of restoration methods;

first selection means for selecting a first processing method from the pre-determined set of processing methods in accordance with properties of an air interface associated with the radio path and for selecting a first restoration method that corresponds to the first processing method;

conveying means configured to convey information about a processing method that belongs to the pre-determined set of processing methods and information about a restoration method that belongs to the pre-determined restoration methods to communications equipment on a route of the communications connection;

means for defining a set of compatible processing methods, each compatible processing method belonging to said pre-determined set of processing methods, having an output information rate that is lower than or equal to the lowest data transfer rate of said first set of data transfer rates and said second set of data transfer rates, and corresponding to a restoration method that belongs to said pre-determined set of restoration methods;

second selection means for selecting, prior to a change from the first set of data transfer rates to a second set of data transfer rates, a second processing method from the set of compatible processing methods to be used by said

communications equipment and for selecting a second restoration method, the second restoration method corresponding to the second processing method.

20. (Previously Presented) The system of claim 19, further comprising:

means for transmitting a command that includes at least one of an order to put the second processing method into use and an order to put the second restoration method into use; and

means for receiving information at a first data transfer rate and for transmitting said information at a second data transfer rate;

wherein said means for determining the first set of data transfer rates, said means for determining the second set of data transfer rates, said first selection means and said second selection means.

21. (Previously Presented) The system of claim 20, wherein the network element further comprises:

means for simultaneously transmitting said information at the second data transfer rate to a first destination and at a third data transfer rate to a second destination.

22. (Previously Presented) The system of claim 19, further comprising:

means for receiving a command that includes at least one of an order to put the second processing method into use and an order to put the second restoration method into use;

wherein said first selection means, said second selection means and a transmitter of said conveying means are realized in a base station device, and said first selection means are configured to perform selections according to radio path quality.

23. (Previously Presented) The system of claim 22, wherein said base station device further comprises:

means for receiving information at a first receiving rate;

means for receiving said information at the second receiving rate, the second receiving rate being higher than the first receiving rate;

means for transmitting said information to a radio path at a first transmission rate; and

means for transmitting said information to the radio path at a second transmission rate, the second transmission rate being higher than the first transmission rate.

24. (Currently Amended) The system of claim 23, wherein said base station device is a base station of a global system for mobile communications (GSM) network and the first transmission rate is a half rate radio interface channel rate and the second transmission rate is a full rate radio interface channel rate.

25. (Currently Amended) The system of claim 23, wherein the base station device is a base station device in an universal mobile telecommunications system (UMTS) network.